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## UNEDITED ROUGH DRAFT TRANSLATION

A METHOD FOR AUTOMATICALLY SETTING THE LIMITING LEVEL  
WHEN RECEIVING BINARY SIGNALS

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English Pages: 2

SOURCE: Byulleten' Izobreteniy, No. 16, 1960, Patent No.  
130929, pp. 17-18.

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A METHOD FOR AUTOMATICALLY SETTING THE LIMITING  
LEVEL WHEN RECEIVING BINARY SIGNALS

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A METHOD FOR AUTOMATICALLY SETTING THE LIMITING  
LEVEL WHEN RECEIVING BINARY SIGNALS

L. I. Byalyy

A method is proposed for automatically setting the limiting level when receiving binary signals, which will make it possible to decrease, compared with the familiar methods usually employed, the probability of errors when receiving a binary train. The method consists in determining, by means of a functional converter, the required value of the limiting level with respect to the given noise level and the average level of the received signal. A standard noise value is created by means of a noise generator, AGC-controlled.

To determine the mean level of the signal of the obtained train of binary signals, the signal is integrated in a time for which it can be considered that the appearance of binary signals is probable, but less than the signal fading time in the line. The integrated noise value created by the noise generator is subtracted from the integrated value of the obtained train of signal and noise. The obtained result, together with the integrated noise value, is fed to the functional converter, where the required limiting threshold is determined automatically from the obtained data.

The feature of the proposed method, which distinguishes it from the familiar methods, is that the mean value of the signal is determined by integrating it and subtracting from it the integrated value from the special noise generator; this

generator is controlled by AGC which is common to the entire system. In addition, integration is accomplished not during the time of individual transmissions, but during a period which makes it possible to consider that the number of unit and zero transmissions is equally probable.

#### Object of the Invention

This method of automatically setting the limiting level when receiving binary signals has the following special feature: to reduce the probability of error when receiving a binary train, the received signal train is integrated in a time which is greater than the duration of the individual transmission, but less than the signal fading time; the integrated value of the noise created during the reception by a noise generator and controlled by an AGC common to the entire system, is subtracted from the obtained value, and the required limiting level is determined from the obtained difference and the value of the noise of the generator by means of a functional converter.